JUL 10 7006 Applicant

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Keith V. Wood et al.

SYNTHETIC NUCLEIC ACID MOLECULE COMPOSITIONS AND METHODS OF

PREPARATION

Docket No.:

341.005US1

Filed:

August 24, 2000

Examiner:

Rebecca E. Prouty

Serial No.: 09/645,706

Due Date: N/A

Group Art Unit: 1652

MS Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

 \underline{X} Return postcard.

X Information Disclosure Statement (2 pgs.), Form 1449 (10 pgs.), and copies of 137 cited documents.

 \overline{X} Check in the amount of \$180.00 to cover the fee for consideration of Information Disclosure Statement under 1.97(c).

If not provided for in a separate paper filed herewith, Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

<u>SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.</u>

Customer Number 21186

Atty: Janet E. Embretson

Reg. No. 39,665

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 77 day of July, 2006.

Name

Signature

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

(GENERAL)



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keith V. Wood et al.

Examiner:

Rebecca E. Prouty

Serial No.:

09/645,706

Group Art Unit:

1652

Filed:

August 24, 2000

Docket:

341.005US1

Title:

SYNTHETIC NUCLEIC ACID MOLECULE COMPOSITIONS AND METHODS

OF PREPARATION

INFORMATION DISCLOSURE STATEMENT

MS Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 et. seq., the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Pursuant to 37 C.F.R. §1.97(c)(2), Applicant has included the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p). Please charge any additional fees or credit any overpayment to Deposit Account No. 19-0743.

Serial No :09/645,706

Filing Date: August 24, 2000

Title: SYNTHETIC NUCLEIC ACID MOLECULE COMPOSITIONS AND METHODS OF PREPARATION

Dkt: 341.005US1

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications, and Non-Published Applications identifiable by USPTO Serial Number, are no longer required to be provided to the Office. Notification to this effect was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004 and October 19, 2004. Thus, Applicant has not included copies of any US Patents or US Patent Applications identifiable by serial number that may be cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicant's Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KEITH V. WOOD ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. Box 2938

Minneapolis, MN 55402

(612) 373-6959

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 474-day of July, 2006.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT many sheets as necessary) JUL 1 0 2006

Sheet 1 of 10

Application Number	09/645,706
Filing Date	August 24, 2000
First Named Inventor	Wood, Keith
Group Art Unit	1652
Examiner Name	Prouty, Rebecca

		US PAT	ENT DOCUMENTS	
Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
·	US-2003/0157643A1	08/21/2003	Almond, B. D., et al.	12/09/2002
	US-2006/0127988A1	06/15/2006	Wood, K. V., et al.	12/22/2005
	US-4,246,340	01/20/1981	Lundin, A. T., et al.	05/30/1979
	US-4,412,001	10/25/1983	Baldwin, T. O., et al.	12/03/1981
	US-4,503,142	03/05/1985	Berman, M. L., et al.	06/25/1982
	US-4,581,335	04/08/1986	Baldwin, T. O., et al.	12/01/1982
	US-5,106,732	04/21/1992	Kondo, K., et al.	02/14/1990
	US-5,168,062	12/01/1992	Stinski, M. F.	09/10/1990
	US-5,196,524	03/23/1993	Gustafson, G. D., et al.	01/06/1989
	US-5,221,623	06/22/1993	Legocki, R. P., et al.	07/19/1989
·	US-5,605,793	02/25/1997	Stemmer, W. P.	02/17/1994
	US-5,618,682	04/08/1997	Scheirer, W.	02/08/1994
	US-5,629,168	05/13/1997	Kricka, Larry J.	06/07/1995
	US-5,744,307	04/28/1998	Kuroda, N,, et al.	09/12/1995
	US-5,814,471	09/29/1998	Wood, K. V.	04/09/1997
	US-6,602,677	08/05/2003	Wood, K. V., et al.	98/15/1999

	FOF	REIGN PATENT I	DOCUMENTS	
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
	EP-0337349A2	10/18/1989	Kajiyama, N., et al.	
•	EP-0364707A1	04/25/1990	Tatsumi, H., et al.	
	EP-0437013A2	07/17/1991	Smith, D. F., et al.	
	EP-0449621A1	10/02/1991	Kajiyama, N.	
	EP-0524448A1	01/27/1993	Kajiyama, N., et al.	
	EP-0353464B1	10/20/1993	Tatsumi, H., et al.	
	JP-03-167288	07/19/1991	Inoue, S.	$\sqrt{}$
	JP-07-067696 (w/ English Abstract)	03/14/1995	Yoshitami, M., et al.	
	JP-09-294600 (w/ English Abstract)	11/18/1997	Tatsumi, H., et al.	
-	JP-10-87621	04/07/1998	Masako, M.	
	WO-90/01542A1	02/22/1990	Kazami, J., et al.	
	WO-91/16432A1	10/31/1991	Cornelissen, M., et al.	
	WO-92/15673A1	09/17/1992	Cormier, M. J., et al.	
	WO-95/18853A1	07/13/1995	Wood, K. V., et al.	
	WO-9726333A1	07/24/1997	Zolotukhin, S., et al.	
	WO-98/13487A1	04/02/1998	Stemmer, W. P., et al.	
	WO-98/46729A2	10/22/1998	Squirrell, D., et al.	

EXAMINER

DATE CONSIDERED

PTO/SB/08A(10-01)
Approved for use through 10/31/2002, OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
or the Paperwork Reduction Act of 1996, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/645,706 STATEMENT BY APPLICANT August 24, 2000 (Use as many sheets as necessary) Filing Date **First Named Inventor** Wood, Keith **Group Art Unit** 1652 Prouty, Rebecca **Examiner Name** Attorney Docket No: 341.005US1 Sheet 2 of 10

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Τ2
		"Dual-Luciferase™ Reporter Assay System", (1998),2 pgs.	
		"Luciferase Reporter Gene Technology", (1996), 4 pgs.	
		"Promega Technical Bulletin No. 161 - Luciferase Assay System With Reporter	
		Lysis Buffer", (March, 1998),9 pgs.	
		"Promega Technical Bulletin No. 101- Luciferase Assay System", (March, 1998), 9 pgs.	
		"Promega Technical Manual - Dual-Luciferase™ Reporter Assay System", (February, 1999),26 pgs.	
		"Promega Technical Manual - Steady-Glo™ Luciferase Assay System", (October, 1998), 19 pgs.	
		"Steady-Glo™ Luciferase Assay System", (1998), 2 pgs.	
		"TESS - Filtered String Search Page", http://www.cbil.upenn.edu/cgi-	
		bin/tess/tess?RQ=SEA-FR-QueryF, (June, 2006)	
		ALAM, J., et al., "Reporter Genes: Application to the Study of Mammalian Gene	
		Transcription", Analytical Biochemistry, 188(2), (1990),245-254	
		ANDREWS, E. M., et al., "Hierarchy of Polyadenylation Site Usage by Bovine	
		Papillomavirus in Transformed Mouse Cells", <u>Journal of Virology</u> , 67(12),	
		(December, 1993), 7705-7710 ARNOLD, F. H., "Directed Evolution: Creating Biocatalysts for the Future",	
		Chemical Engineering Science, 51, (1996), 5091-5102	
		BACHMAIR, A., "In Vivo Half-Life of a Protein is a Function of its Amino	+
		Terminal Residue", Science, 234(4773), (1986),179-186	
		BONIN, A. L., "Photinus pyralis Luciferase: Vectors that Contain a Modified luc	
		Coding Sequence Allowing Convenient Transfer into Other Systems", Gene. 141(1), (1994),75-77	
		BOROVKOV, A. Y., et al., "Xcml-containing Vector for Direct Cloning of PCR Products," BioTechniques, 22(5), (May, 1997), 812-814	
		BOTHWELL, A. L., et al., "Heavy Chain Variable Region Contribution to the NP ^b	+
		Family of Antibodies: Somatic Mutation Evident in a γ 2a Variable Region", Cell. 24(3), (June, 1981), 625-637	
		BOUTHORS, AT., "Site-Directed Mutagenesis of Residues 164, 170, 171, 179,	+
		220, 237 and 242 in PER-1 ß-lactamase Hydrolysing Expanded-Spectrum	
		Cephalosporins", Protein Engineering, 12(4), (1999), 313-318	ĺ
		BOWIE, J U., et al., "Deciphering the Message in Protein Sequences: Tolerance	
		to Amino Acid Substitutions", Science, 247(4948), (March 16, 1990), 1306-1310	1
		BRANCHINI, B. R., et al., "Naphtyl- and Quinolylluciferin: Green and Red Light	
		Emitting Firefly Luciferin Analogues", Photochemistry and Photobiology, 49(5).	
		(1989), 689-695 BRONSTEIN, I. et al., "Chemiluminescent and Bioluminescent Reporter Gene	
		Assays", Analytical Biochemistry, 219(2), (1994), 169-181	

PTO/SB/08A(10-01)
Approved for use through 10/31/2002, OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
or the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/645,706 STATEMENT BY APPLICANT August 24, 2000 (Use as many sheets as necessary) Filing Date **First Named Inventor** Wood, Keith **Group Art Unit** 1652 Prouty, Rebecca **Examiner Name** Attorney Docket No: 341.005US1 Sheet 3 of 10

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		CADWELL, R. C., et al., "Randomization of Genes by PCR Mutagenesis", PCR Methods and Applications, 2, (1992), 28-33	
		CARSWELL, S., et al., "Efficiency of Utilization of the Simian Virus 40 Late	-
		Polyadenylation Site: Effects of Upsteam Sequences", Molecular and Cellular Biology, 9(10), (1989), 4248-4258	
		CHEN, CY. A, "Interplay of Two Functionally and Structurally Distinct Domains	
		of the <i>c-fos</i> AU-Rich Element Specifies Its Mrna-Destabilizing Function",	
		Molecular and Cellular Biology, 14(1), (January, 1994), 416-426	
		DE WET, J. R., "Cloning of Firefly Luciferase cDNA and the Expression of	
		Active Luciferase in <i>Escherichia coli</i> ", <u>Proc. Natl. Acad. Sci. USA, 82,</u> (1985), 7870-7873	
		DE WET, J. R., "Firefly Luciferase Gene: Structure and Expression in	
		Mammalian Cells", Molecular and Cellular Biology, 7(2), (1987),725-737	
		DELUCA, M., et al., "Role of Sulfhydryl Groups in Firefly Luciferase",	
		Biochemistry, 3(7), (1964), 935-939	ł
		DELUCA, M., et al., "The Hydrolase Properties of Firefly Luciferase",	
		Biochemical and Biophysical Research Communications, 18(5-6), (1965), 836-842	
· · · · · · · · · · · · · · · · · · ·	4.00	DELUCA, M., et al., "The Role of 1,N6-Ethenoadenosine Triphosphate and 1, N6-	ļ
		Ethenoadenosine", Proc. Nat. Acad. Sci. USA, 70(6), (1973), 1664-1666	
		DEMENTIEVA, E. I., "Physicochemical Properties of Recombinant Luciola	
		mingrelica Luciferase and its Mutant Forms", <u>Biochemistry</u> , 61 (1), (1996), 115-119	
		FARR, A., et al., "A Pitfall of Using a Second Plasmid to Determine Transfection Efficiency", Nucleic Acids Research, 20(4), (February 25, 1992), Page 920	
		FLEER, R., "High-Level Secretion of Correctly Processed Recombinant Human interleukin-1ß in Kluyveromyces lactis", Gene, 107(2), (1991),285-295	
		FORD, S. R., et al., "Enhancement of Firefly Luciferase Activity by Cytidine Nucleotides", Analytical Biochemistry, 204(2), (1992),283-291	
		FRAMPTON, J., et al., "Synergy Between the NF-E1 Erythroid-Specific Transcription Factor and the CACCC Factor in the Erythroid-Specific Promoter of	
		the Human Porphobilinogen Deaminase Gene", Molecular and Cellular Biology, 10(7), (July, 1990), 3838-3842	
		FROMANT, M, et al., "Direct Random Mutagenesis of Gene-Sized DNA	
		Fragments Using Polymerase Chain Reaction", <u>Analytical Biochemistry</u> , 224, (1995), 347-353	
		GLUZMAN, Y., "SV40-Transformed Cells Support the Replication of Early SV40	
		Mutants", Cell, 23(1), (January, 1981),175-182 GOULD, S. J., "A Conserved Tripeptide Sorts Proteins to Peroxisomes", The	
		Journal of Cell Biology, 108, (1989), 1657-1664	

PTO/SB/08A(10-01)
Approved for use through 10/31/2002. OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
and to a collection of information unless it contains a valid OMB control number.

	Complete if Known		
l .	Application Number	09/645,706	
(Use as many sheets as necessary)	Filing Date	August 24, 2000	
	First Named Inventor	Wood, Keith	
	Group Art Unit	1652	
	Examiner Name	Prouty, Rebecca	
Sheet 4 of 10	Attorney Docket No: 3	341.005US1	

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		GOULD, S. J., "Antibodies Directed Against the Peroxisomal Targeting Signal of Firefly Luciferase Recognize Multiple Mammalian Peroxisomal Proteins", The	-
		Journal of Cell Biology, 110, (1990), 27-34 GOULD, S. J., et al., "Firefly Luciferase as a Tool in Molecular and Cell Biology",	_
		Analytical Biochemistry, 175, (1988), 5-13	
		GOULD, S. J., "Identification and Characterization of a Peroxisomal Targeting	_
		Signal", Dissertation Abstracts International, Vol. 50/07-B, (1989), 2 pgs.	
		HANAHAN, D., "Chapter 4 - Techniques for Transformation of <i>E. coli</i> ", <u>In: DNA</u> Cloning: A Practical Approach, Volume 1, Chapter 6, Glover, D.W., (Editor), IRL	
		Press, Oxford,(1985), 109-135	
		HASTINGS, J. W., "Biological Diversity, Chemical Mechanisms, and the	
		Evolutionary Origins of Bioluminescent Systems", <u>Journal of Molecular Evolution</u> , 19(3/4), (1983),309-321	
		HÖFTE, H., et al., "Structural and Functional Analysis of a Cloned Delta	
		Endotoxin of Bacilllus thuringiensis Berliner 1715", European Journal of	
		Biochemistry, 161, (1986), 273-280	ļ
		HOLCIK, M., et al., "Four Highly Stable Eukaryotic mRNAs Assemble 3"	
		Untranslated Region RNA-Protein Complexes Sharing cis and Trans	
		Components", <u>Proc. Natl. Acad. Sci. USA, 94, (March, 1997), 2410-2414</u> HSIEH, CJ., "Nucleotide Sequence, Transcriptional Analysis, and Glucose	-
		Regulation of the Phenoxazinone Synthase Gene (phasA) from Streptomyces	
		antibioticus", Journal of Bacteriology, 177(20), (October, 1995), 5740-5747	<u> </u>
		JANOWSKI, M., "Ras Proteins and the ras-Related Signal Transduction Pathway", Radiation and Environmental Biophysics, 30(3), (1991), 185-189	
		JENSEN, P. R., et al., "The Sequence of Spacers Between the Consensus Sequences Modulates the Strength of Prokaryotic Products", Applied and Environmental Microbiology, 64(1), (January, 1998), 82-87	
		JOHNSON, L.R., "Role of the Transcription Factor Sox-2 in the Expression of the FGF-4 Gene in Embryonal Carcinoma Cells", Molecular Reproduction and Development., 50(4), (1998), 377-386	
		JONES, P L., "Tumor Necrosis Factor Alpha and Iinterleukin-1ß Regulate the Murine Manganese Superoxide Dismutase Gene Through a Complex Intronic Enhancer Involving C/EBP-ß and NF-κß", Molecular and Cellular Biology.	
		17(12), (1997), 6970-6981 KAJIYAMA, N., et al., "Enhancement of Thermostability of Firefly Luciferase from Luciola lateralis by a Single Amino Acid Substitution", Bioscience, Biotechnology, and Biochemistry, 58(6), (June 1994), 1170-1171	
		KAJIYAMA, N., et al., "Isolation and Characterization of Mutants of Firefly Luciferase Which Produce Different Colors of Light", Protein Engineering, 4(6), (August 1991), 691-693	

PTO/SB/084(10-01)
Approved for use through 10/31/2002. OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
or the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/645,706 STATEMENT BY APPLICANT August 24, 2000 (Use as many sheets as necessary) Filing Date Wood, Keith **First Named Inventor Group Art Unit** 1652 **Examiner Name** Prouty, Rebecca Attorney Docket No: 341.005US1 Sheet 5 of 10

<u> </u>	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		KAJIYAMA, N, et al., "Thermostabilization of Firefly Luciferase by a Single	
		Amino Acid Substitution at Position 217", Biochemistry, 32(50), (December 21,	
		1993), 13795-13799	
		KAO, R., et al., "Single Amino Acid Substitutions Affecting the Specificity of the	
		Fungal Ribotoxin Mitogillin", FEBS Letters, 466(1), (January 21, 2001), 87-90	
		KAY, S. A., et al., "Video Imaging of Regulated Firefly Luciferase Activity in	
		Transgenic Plants and <i>Drosophila</i> ", <u>Promega Notes Magazine, 49</u> , (1994), 7	•
		pgs.	
		KUPRASH, D V., "Conserved &B Element Located Downstream of the Tumor	
		Necrosis Factor a Gene: Distinct NF-xB Binding Pattern and Enhancer Activity in	
		LPS Activated Murine Macrophages", Oncogene, 11(1), (1995), 97-106	
		KUTUZOVA, G. D., et al., "Bioluminescence Color Variation and Kinetic	
		Behavior Relationships Among Beetle Luciferases", Bioluminescence and	
		Chemiluminescence, Molecular Reporting with Photons, J W Hastings et al.,	
		(Editors), John Wiley & Sons, Chinchester, England,(1996), 248-252	
		LAMB, K A., "Effects of Differentiation on the Transcriptional Regulation of the	
		FGF-4 Gene: Critical Roles Played by a Distal Enhancer", Molecular	
		Reproduction and Development, 51(2), (1998), 218-224	
		LATHE, R., "Synthetic Oligonucleotide Probes Deduced From Amino Acid	
		Sequence Data Theoretical and Practical Considerations", <u>Journal of Molecular</u>	
		Biology, 183, (1985), 1-12	
		LEE, R. T., "Substrate-Binding Properties of Firefly Luciferase", Archives of	
		Biochemistry and Biophysics, 141(1), (1970), 38-52	
		LEWIS, M. K., et al., "Efficient Site Directed in vitro Mutagenesis Using Ampicillin	
		Selection", Nucleic Acids Research, 18(12), (1990), 3439-3443	
		LORENZ, W. W., et al., "Isolation and Expression of a cDNA Encoding Renilla reniformis Luciferase", Proc. Nat. Acad. Sci. USA, 88, (May, 1991), 4438-4442	
		LUCAS, M., et al., "Coelenterazine Is a Superoxide Anion-Sensitive	1
		Chemiluminescent Probe: Its Usefulness in the Assay of Respiratory Burst in	
		Neutrophils", Analytical Biochemistry, 206(2), (November 1, 1992), 273-277	
		MANUKHOV, I. V., et al., "Cloning of the Vibrio harveyi luxA and luxB Genes	
		and the Expression of Bioluminescence in Escherichia coli and Bacillus subtilis",	1
		Russian Biotechnology, 1, (1996), 1-6	
		MARANVILLE, E., et al., "Assessment of Amino-Acid Substutions at Tryptophan	
		16 in α-galactosidase", European Journal of Biochemistry, 267(5), (2000), 1495-	
		1501	
		MATSUMURA, I., et al., "Directed Evolution of the Surface Chemistry of the	
		Reporter Enzyme ß-glucuronidase", Nature Biotechnology, 17, (July, 1999),	
		696-701	
	1	MATTHEWS, J, "Purification and Properties of Renilla reniformis Luciferase.",	
		Biochemistry, 16(1), (January 11, 1977),85-91	
			

PTO/SB/08A(10-01)
Approved for use through 10/31/2002. OMB 951-0031
US Petent & Trademerk Office: U.S. DEPARTMENT OF COMMERCE
and to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known		
	Application Number	09/645,706	
(Use as many sheets as necessary)	Filing Date	August 24, 2000	
	First Named Inventor	Wood, Keith	
	Group Art Unit	1652	
	Examiner Name	Prouty, Rebecca	
Sheet 6 of 10	Attorney Docket No: 3	341.005US1	

	OTHER	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		MCELROY, W. D., "Factors Influencing the Response of the Bioluminescent	
		Reaction to Adenosine Triphosphate", Archives of Biochemistry and Biophysics,	
		<u>22,</u> (1949), 420-433	
1		MCELROY, W. D., et al., "Function of Adenosine Triphosphate in the Activation	
		of Luciferin", Archives of Biochemistry and Biophysics, 64, (1956),257-271	
		MCELROY, W. D., et al., "Mechanisms of Bioluminescent Reactions", In: A	
		Symposium on Light and Life, McElroy, W. D., et al., Editors, (John Hopkins	
		Press, 1961), 219-257	
		MCWHERTER, C. A., et al., "Scanning Alanine Mutagenesis and De-	
		Peptidization of a Candida albicans Myristoyl-CoA: Protein N-	
		Myristoyltransferase Octapeptide Substrate Reveals Three Elements Critical for	
		Molecular Recognition", <u>Journal of Biological Chemistry</u> , <u>272(18)</u> , (1997), 11874-11880	
		MOUNT, S. M., "Genomic Sequence, Splicing, and Gene Annotation", American	
		Journal of Human Genetics, 67(4), (2000), 788-792	
		MOYER, J. D., et al., "Nucleoside Triphosphate Specificity of Firefly Luciferase",	
		Analytical Biochemistry, 131(1), (1983), 187-189	
		MURAKAMI, S., et al., "Bioluminescent Enzyme Immunoassay Using	
		Thermostable Mutant Luciferase and Acetate Kinase as a Labelled Enzyme",	
		Analytica Chimica, 361, (1998),19-26	
		MURRAY, I. A., et al., "Steroid Recognition by Chloramphenicol	
		Acetyltransferase: Engineering and Structural Analysis of a High Affinity Fusidic Acid Binding Site", Journal of Molecular Biology, 254 (1995), 993-1005	
		NIBU, Y., "A Cell Type-Dependent Enhancer Core Element is Located in Exon 5	
		of the Human Angiotensinogen Gene", Biochemical Biophysical Research	
	_	Communications, 205(2), (1994), 1102-1108	
		OW, D. W., "Transient and Stable Expression of the Firefly Luciferase Gene in	
		Plant Cells and Transgenic Plants", <u>Science</u> , 234(4778), (November 14, 1986),	
		856-859	
		PETIT, T., et al., "A Mutation Ser ²¹³ /Asn in the Hexokinase 1 from	
		Schizosaccharomyces pombe Increases Its Affinity for Glucoses", Biochemical	
		and Biophysical Research Communications, 251(3), (October 29, 1998),	
		714-719	
		PINTO, M., et al., "Denaturation of Proteins During Heat Shock", <u>The Journal of Biological Chemistry</u> , 266(21), (1991), 13941-13946	
		PURDY, D., et al., "Heterologous Gene Expression in Campylobacter coli: The	
		Use of Bacterial Luciferase in a Promoter Probe Vector", FEMS Microbiology	
		Letters, 111(2-3), (August 1, 1993), 233-237	

EXAMINER	DATE CONSIDERED
----------	-----------------

PTO/SB/084(10-01)
Approved for use through 10/31/2002. OMB 951-0031
US Patent & Trademerk Office: U.S. DEPARTMENT OF COMMERCE
Inder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE **Application Number** 09/645,706 STATEMENT BY APPLICANT August 24, 2000 **Filing Date** (Use as many sheets as necessary) **First Named Inventor** Wood, Keith **Group Art Unit** 1652 Prouty, Rebecca **Examiner Name** Attorney Docket No: 341.005US1 Sheet 7 of 10

Examiner	Cite	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item	T²
Initials*	No ¹	(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		REESE, M.G., "Large Scale Sequencing Specific Neural Networks for Promoter	
		and Splice Site Recognition", Biocomputing: Proceedings of the 1996 Pacific	-
		Symposium, Hunter, L., et al., Editors, World Publishing Co., Singapore	
		(Abstract Only), (1996), 1 pg.	
	-	REESE, M G., et al., "New Neural Network Algorithms for Improved Eukaryotic	
		Promoter Site Recognition", The Seventh International Genome Sequencing and	
		Analysis Conference, Hilton Head Island, South Carolina, (Abstract Only),	
		(1995), 1 pg.	
		RHODES, W. C., "The Synthesis and Function of Luciferyl-adenylate and	
		Oxyluciferyl-adenylate", <u>J. Biol. Chem., 233(6),</u> (1958), 1528-1537	
		RIGGS, K. J., et al., "Common Factor 1 Is a Transcriptional Activator Which	
		Binds in the <i>c-myc</i> Promoter, the Skeletal <i>a</i> -Actin Promoter, and the	
		Immunoglobulin Heavy-Chain Enhancer", Molecular and Cellular Biology, 11(3),	
)March, 1991), 1765-1769	
		ROMMENS, J. M., et al., "cAMP-inducible Chloride Conductance in Mouse	Γ
		Fibroblast Lines Stably Expressing the Human Cystic Fibrosis Transmembrance	
		Conductance Regulator", Proc. Natl. Acad. Sci., 88, (1991), 7500-7504	
		ROSENDAHL, M. S., et al., "Dimensional Probing of the ATP Binding Site on	
		Firefly Luciferase", Photochemistry and Photobiology, 35(6), (1982),857-861	
		SAIKI, R. K., et al., "Primer-Directed Enzymatic Amplification of DNA with a	
		Thermostable DNA Polymerase", Science, 239(4839), (January 29, 1988),	
		487-491	
		SAISANIT, S., "A Novel Enhancer, the Pro-B Enhancer, Regulates Id1 Gene	
		Expression in Progenitor B Cells", Mol. Cell. Biol., 15(3), (1995),1513-1521	
		SALA-NEWBY, G., "Engineering a Bioluminescent Indicator for Cyclic AMP-	Т
		Dependent Protein Kinase", Biochemical, Journal, 279(Part 3), (November	
		1991),727-732	
		SALA-NEWBY, G. B., et al., "Expression of Recombinant Firefly Luciferase in	
		Prokaryotic and Eukaryotic Cells", Biochemical Society Transactions, 20, (1992),	
		Pg. 143S	
		SALA-NEWBY, G. B., "Stepwise Removal of the C-Terminal 12 Amino Acids of	T
		Firefly Luciferase Results in Graded Loss of Activity", Biochimica et Biophysica	
		Acta (BBA) - Protein Structure and Molecular Enzymology, 1206(1), (1994),	
		155-160	
		SCHMIDT, E. V., et al., "The Cytomegalovirus Enhancer: A Pan-Active Control	T
		Element in Transgenic Mice", Molecular and Cellular Biology, 10(8), (1990),	
		4406-4411	
		SCHUTTE, B., et al., "Optimized Conditions for Cloning PCR Products Into an	T
		Xcml T-Vector", BioTechniques, 22(1), (January, 1997), 40-42, 44	
		SELIGER, H. H., "The Colors of Firefly Bioluminescence: Enzyme Configuration	1
		and Species Specificity", Proc. Natl. Acad. Sci., USA, 52(1), (1964), 75-81	

PTO/SB/08A(10-01)
Approved for use through 10/31/2002, OMB 651-0031
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE
on of information unfess it contains a valid OMB control number.

Substitute for form 1449A/PTO	Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Application Number	09/645,706
	Filing Date	August 24, 2000
	First Named Inventor	Wood, Keith
	Group Art Unit	1652
	Examiner Name	Prouty, Rebecca
Sheet 8 of 10	Attorney Docket No: 3	341.005US1

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	_
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		SENAPATHY, P., et al., "[16] Splice Junctions, Branch Point Sites, and Exons:	
		Sequence Statistics, Identification, and Applications to Genome Project",	
		Methods in Enzymology, 183, (1990), 252-278	
		SEOL, J. H., et al., "Site-Directed Mutagenesis of the Cys Residues in ClpA, the	
		ATPase Component of Protease Ti (SlpAP) in Escherichia coil", Biological	
		Chemistry, 378(10), (Abstract Only), (1997), 1205-1209	ļ
		SHERF, B. A., et al., "Dual-Luciferase™ Reporter Assay: An Advanced Co-	
		Reporter Technology Integrating Firefly and Renilla Luciferase Assays",	
		Promega Notes Magazine, Number 57, (1996), 7 pgs.	<u> </u>
		SIROT, D., et al., "A Complex Mutant of TEM-1 ß-Lactamase With Mutations	
		Encountered in Both IRT-4 and Extended-Spectrum TEM-15, Produced by an	
		Escherichia coli Clinical Isolate", Antimicrobial Agents and Chemotherapy, 41(6),	
		(June, 1997), 1322-1325	<u> </u>
		SOMMER, J. M., "In Vivo Import of Firefly Luciferase into the Glycosomes of	
		Trypanosoma brucei and Mutational Analysis of the C-Terminal Targeting	
		Signal", Molecular Biology of the Cell, 3, (1992), 749-759	
		STAPLETON, P. D., "Construction and Characterization of Mutants of the TEM-1	
		ß-Lactamase Containing Amino Acid Substitutions Associated With Boih Extended-Spectrum Resistance and Resistance to ß-Lactamase Inhibitors",	
		Antimicrobial Agents and Chemotherapy, 43(8), (August, 1999), 1881-1887 STEMMER, W. P., et al., "DNA Shuffling by Random Fragmentation and	
		Reassembly: <i>In vitro</i> Recombination for Molecular Evolution", <u>Proc. Natl. Acad.</u>	
		Sci. USA, 91(22), (October 25, 1994), 10747-10751	
		STEWART, C. L., et al., "Expression of Retroviral Vectors in Transgenic Mice	
		Obtain by Embryo Infection", <u>The EMBO Journal</u> , 6(2), (February, 1987),	
		383-388	
		STRAUSS, E. C., "In vivo Protein-DNA Interactions at Hypersensitive Site 3 of	1
		the Human ß-globin Locus Control Region," Proc. Nat. Acad. Sci. USA, 89,	
		(July, 1992), 5809-5813	
		SZITTNER, R, et al., "Nucleotide Sequence, Expression, and Properties of	
		Luciferase Coded by <i>lux</i> Genes from a Terrestrial Bacterium", The Journal of	
		Biological Chemistry, 265(27), (September 25, 1990) 16581-16587	
		TARPEY, M. M., et al., "Chemiluminescent Detection of Oxidants in Vascular	
		Tissue. Lucigenin But Not Coelenterazine Enhances Superoxide Formation",	
		<u>Circulation Research, 84(10), (May 28, 1999), 1203-1211</u>	
		TERANISHI, K., "Coelenterazine Analogs as Chemiluminescent Probe for	
		Superoxide Anion", Analytical Biochemistry, 249(1), (June 15, 1997), 37-43	
		VOLADRI, R. K. R., "Structure-Function Relationships Among Wild-Type	
		Variants of Staphylococcus aureus ß-Lactamase: Importance of Amino Acids	
		128 and 216", Journal of Bacteriology, 178(24), (December, 1996), 7248-7253	

PTO/SB/08A(10-01)
Approved for use through 10/31/2002, CMB 651-0031
US Patient & Trademark Office: U.S. DEPARTMENT OF COMMERCE
or the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO Complete if Known INFORMATION DISCLOSURE 09/645,706 **Application Number** STATEMENT BY APPLICANT August 24, 2000 (Use as many sheets as necessary) **Filing Date First Named Inventor** Wood, Keith 1652 **Group Art Unit Examiner Name** Prouty, Rebecca Attorney Docket No: 341.005US1 Sheet 9 of 10

Examiner	Cite	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item	T²
Initials*	No 1	(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		WADA, KN., et al., "Codon Usage Tabulated From the GenBank Genetic	
		Sequence Data", Nucleic Acids Research, 20(Suppl.), (1992),2111-2118	
		WAGNER, E. F., et al., "Transfer of Genes Into Embryonal Carcimona Cells by	
		Retrovirus Infection: Efficient Expression From an Internal Promoter", The	
		EMBO Journal, 4(3), (March, 1985), 663-666	
	-	WALKER, D. E., et al., "An Aspartic Acid at Amino Acid 108 Is Required To	
		Rescue Infectious Virus After Transfection of a Poliovirus cDNA Containing a	
		CGDD but Not SGDD Amino Acid Motif in 3D ^{pol} ", <u>Journal of Virology</u> , 69(12),	
		(1995), 8173-8177	
		WHITE, P J., et al., "Generation and Characterisation of a Thermostable Mutant	
		of Luciferase from Photinus Pyralis", In: Bioluminescence and	
		Chemiluminescence, Fundamentals and Applied Aspects, Proceedings of the	
		8th International Symposium on Bioluminescence and Chemiluminescence,	
		John Wiley & Sons, Cambridge, (September 1994), 419-422	
		WHITE, P. J., "Improved Thermostability of the North American Firefly	
		Luciferase: Saturation Mutagenesis at Position 354", Biochemical Journal,	1
		319 (Part 2), (October 15, 1996), 343-350	
		WOOD, K. V., "Bioluminescent Click Beetles Revisited", Journal of	
		Bioluminescence and Chemiluminescence, 4(1), (July,1989), 31-39	
		WOOD, K. V., "Complementary DNA Coding Click Beetle luciferases Can Elicit	
		Bioluminescence of Different Colors", Science, 244(4905), (May 12, 1989),	
		700-702	
		WOOD, KEITH V., "Introduction to Beetle Luciferases and Their Applications",	
		Journal of Bioluminescence and Chemiluminescence, 4, (July, 1989), 289-301	
		WOOD, KV., "Luc Genes: Introduction of Colour Into Bioluminescence	
		Assays", Journal of Bioluminescence and Chemiluminescence, 5, (April, 1990),	
		107-114	
		WOOD, K. V., "Photographic Detection of Luminescence in Escherichia coli	
		Containing the Gene for Firefly Luciferase", Analytical Biochemistry, 161(2),	
		(March 1987), 501-507	L
		WOOD, K. V., et al., "Synthesis of Active Firefly Luciferase by In Vitro	
		Translation of RNA Obtained From Adult Lanterns", Biochemical and Biophysical	
		Research Communications, 124(2), (October 30, 1984),592-596	
		WOOD, K. V., "The Chemical Mechanism and Evolutionary Development of	
		Beetle Bioluminescence", Photochemistry and Photobiology, 62 (4), (1995)	
		,662-673	
		YANAI, K., et al. "A cis-acting DNA Element Located Between TATA box and	
		Transcription Initiation site Is Critical in Response to Regulatory Sequences in	
		Human Angiotensinogen Gene", <u>Journal of Biological Chemisty</u> , 271(27),	
		(1996), 15981-15986	\perp

PTO/SB/08A(10-01)
Approved for use through 10/31/2002. OMB 651-0031
US Patent & Trademark Tonce. U.S. DEPARTMENT OF COMMERCE
to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO	Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OME control number Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Application Number	09/645,706
	Filing Date	August 24, 2000
	First Named Inventor	Wood, Keith
	Group Art Unit	1652
	Examiner Name	Prouty, Rebecca
Sheet 10 of 10	Attorney Docket No: 341.005US1	

	OTHE	R DOCUMENTS NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		YE, L., "Cloning and Sequencing of a cDNA for Firefly Luciferase from <i>Photuris pennsylvanica</i> ", Biochimica et Biophysica Acta, 1339 (1), (April 25, 1997), 39-52	
	-	ZHANG, JH., et al., "Directed Evolution of a Fucosidase From a Galactosidase by DNA Shuffling and Screening", Proc.Natl. Acad. Sci. USA, 94(9), (April 29, 1997), 4504-4509	
		ZHAO, H., et al., "Functional and Nonfunctional Mutations Distinguished by Random Recombination of Homologous Genes", <u>Proc. Natl. Acad. Sci. USA</u> , 94(15), (July 22, 1997), 7997-8000	